

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Currently amended) An isolated nucleic acid molecule that encodes a cyclin domain-containing polypeptide comprising an amino acid sequence greater than 70% identical to amino acids 361 through 521 of SEQ ID NO:2, wherein the polypeptide functions in meiotic cells of plants to maintain normal pairing of homologous chromosomes, ~~comprising a sequence of a gene located on *Arabidopsis thaliana* chromosome 1, the disruption of said gene resulting in a phenotype of abnormal homologous chromosome attachment during the meiotic prophase I.~~
2. (Currently amended) The nucleic acid molecule of claim 1, comprising a sequence greater than 70% identical to nucleotides 1238-1720 of SEQ ID NO:1 ~~which encodes a protein having a cyclin domain.~~
3. (Currently amended) The nucleic acid molecule of claim 2, comprising a sequence greater than 95% identical to nucleotides 1238-1720 of SEQ ID NO:1 ~~wherein the gene comprises one or more exons that form an open reading frame having a sequence that encodes a polypeptide approximately 578 amino acids in length.~~
4. (Currently amended) The A cDNA molecule comprising the exons of the nucleic acid of claim 3, comprising nucleotides 1238-1720 of SEQ ID NO:1.
5. (Currently amended) The nucleic acid molecule of claim 1 ~~3~~, wherein the encoded polypeptide open reading frame ~~comprises a sequence encoding~~ an amino acid sequence at least 95 ~~70~~-% identical to ~~a cyclin domain comprising~~ amino acids 361 through 521 of SEQ ID NO:2.
6. (Currently amended) The nucleic acid molecule of claim 5 ~~3~~, wherein the encoded polypeptide open reading frame ~~comprises~~ amino acids 361 through 521 ~~a sequence encoding an amino acid sequence which is at least 50% identical to SEQ. ID NO:2 over the entire length of SEQ. ID NO:2.~~

DOCKET NO.: PSU-0020 (99-2205 US)  
Application No.: 09/821,839  
Office Action Dated: April 25, 2003

PATENT  
REPLY FILED UNDER EXPEDITED  
PROCEDURE PURSUANT TO  
37 CFR § 1.116

7. (Currently amended) The nucleic acid molecule of claim 6, ~~which wherein the open reading frame~~ encodes SEQ ID NO:2.

8. (Currently amended) The nucleic acid molecule of claim ~~7~~ 6, which comprises an ~~open reading frame having the sequence of the one or more exons of~~ SEQ ID NO:1.

9-11. (Canceled)

12. (Original) A vector for transforming a plant cell, comprising the nucleic acid molecule of claim 1.

13. (Original) A transformed plant cell comprising the vector of claim 12.

14-26. (Canceled)